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P878  
Suppl.  
Cap 2

SUPPLEMENT II TO POWER COST STUDY

WISCONSIN 64 LACROSSE

UNITED STATES DEPARTMENT OF AGRICULTURE  
RURAL ELECTRIFICATION ADMINISTRATION  
WASHINGTON 25, D. C.

JULY 17, 1951

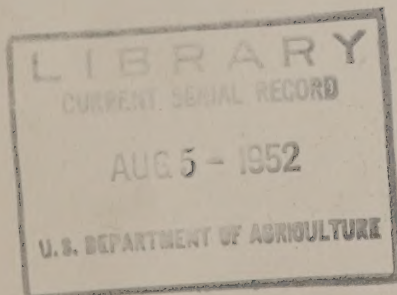
Approved by: \_\_\_\_\_

Thomas B. Dunphy, Head  
Power Procurement Section

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Power Management Section



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E. J. Raushenberger, Head  
Internal Combustion Section

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W. E. Rushlow, Head  
Power Operations Section

UNITED STATES DEPARTMENT OF AGRICULTURE

OFFICE OF THE SECRETARY

WASHINGTON, D. C.

January 17, 1907

Dear Sir:

I have the honor to acknowledge the receipt of your letter of the 15th inst.

and in reply to inform you that the same has been forwarded to the proper authorities for their consideration.

I am, Sir, very respectfully,  
Yours very truly,  
J. B. Thompson

Special Agent in Charge

United States Department of Agriculture

Washington, D. C.

Very truly,  
J. B. Thompson

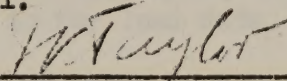
SUPPLEMENT II TO POWER COST STUDY

WISCONSIN 64 LaCROSSE

SYSTEM POWER ANALYSIS

The purpose of this supplement is to amend the Supplement No. 1 dated June 29, 1951 to cover the changes in the estimated cost of moving the Baldwin Units to Twin Lakes.

When the Dairyland system is operating at the allocated load of 470,051,820 kwh at the member cooperatives' substations the cost of power is estimated to be 1.19 cents per kwh. This includes the change proposed in this supplement and is the same cost of power as was reported in the Power Cost Study of December 20, 1950 and Supplement No. 1 dated June 29, 1951.

  
\_\_\_\_\_  
J. K. Taylor, Head  
Power Planning Staff  
Power Division



## SUPPLEMENT II TO POWER COST STUDY

### WISCONSIN 64 LACROSSE

#### POWER COST STUDY

Since the Supplement No. 1 of June 29, 1951 was prepared a new estimate of the costs of moving the Baldwin units to Twin Lakes and associated expenses has been received from the cooperative with their letter of July 6, 1951. This change increases the estimated cost by \$124,500.

This change in investment and the new budget for the job is set out in detail as Appendix II. The load data used in this supplement remains the same as that used in Supplement No. 1 dated June 29, 1951. This study does not, therefore, include load data. Appendix I of Supplement No. 1 should be referred to for load data.

This change does not affect the cost of power to the Dairyland system. The estimated cost of power under allocated conditions is 1.19 cents per kwh delivered at the member substations.

The details of the cost of power are included as Appendix III. Appendix III makes reference to the Supplement No. 1 dated June 29, 1951 as the analysis modifies only the items effected by this change.

This change does not effect the economic advantage to the cooperative of moving the units compared to the installation of new units as the increase in cost would effect each alternative equally.

As in the case of Supplement No. 1 dated June 29, 1951, this study does not include the interest and amortization of the funds remaining under stop order for the redevelopment of Port Arthur. It also includes only the capacity and output of Port Arthur prior to redevelopment.

This Supplement No. 2 should be considered in conjunction with Supplement No. 1 dated June 29, 1951.



## APPENDIX II

### INVESTMENTS

#### A. Changes over PCS Supplement No. 1 dated June 29, 1951

##### 1. Moving of Baldwin Units to Twin Lakes - New Budget Cash Requirements Only

(a) Structure & Improvements	\$171,400
(b) Internal Combustion Engines	173,360
(c) Accessory Electrical Equipment	35,000
(d) Station Equipment	112,240
(e) Overhead	18,000
Total at Twin Lakes	<u>\$510,000</u>
(f) Loading at Baldwin	17,000
Total	<u>\$527,000</u>

##### 2. Source of Funds

(a) Reduce Port Arthur (Last Loan) by	\$527,000
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#### B. Budget Last Loan With Changes

30,000 kw unit Stoneman	\$3,159,000
Baldwin Deficiency	61,500
Move Baldwin Units to Twin Lakes	527,000
Port Arthur Hydro	1,526,000
Transmission	1,749,000
Miscellaneous	231,500
Total	<u>\$7,254,000</u>

Less Funds Available Previous Loan

1,814,000

Net Loan

\$5,440,000

#### C. Stop Order Changes

Stop Order in Effect (Port Arthur)	\$2,053,000
To Be Lifted and Used for Twin Lakes Changes	527,000
To Remain Under Stop Order	<u>\$1,526,000</u>

#### D. Total Funds With Changes (a)

<u>Item</u>	<u>Amount</u>
Chippewa Diesel	\$587,420.00
Alma Steam	8,240,000.00
Baldwin Diesel (a)	861,500.00
Stoneman Steam Unit 1	4,552,000.00
Stoneman Steam Unit 2	3,159,000.00

# APPENDIX

## INVESTMENTS

A. Changes over 1958 Supplement No. 1 dated June 29, 1957

1. Moving of Baldwin Units to Twin Lakes - New Budget  
Cash Requirements Only

217,400	(a) Structures & Improvements
173,350	(b) Internal Communication Equipment
35,000	(c) Accessory Electrical Equipment
112,250	(d) Station Equipment
18,000	(e) Overhead
527,000	Total at Twin Lakes
17,000	(f) Loading at Baldwin
527,000	Total

2. Source of Funds  
(a) Reserve Fund Arthur (last loan) by

527,000

B. Budget last loan with changes

30,000	at unit 200000
51,200	Baldwin Unit
257,000	Move Baldwin Units to Twin Lakes
1,226,000	Port Arthur Hydro
1,480,000	Transmission
271,200	Miscellaneous
3,224,000	Total

Less Funds Available Previous Loan  
Net Loan

1,814,000  
3,224,000

C. Stop Order Changes

22,023,000	Stop Order in Effect (Port Arthur)
227,000	To Be Lifted and Used for Twin Lakes Changes
21,796,000	To Remain Under Stop Order

D. Total Funds With Changes (a)

2,150,000.00	Steam Unit 2
4,523,000.00	Steam Unit 1
661,500.00	Baldwin Diesel (a)
8,240,000.00	Atom Steam
2,387,450.00	Gasoline Diesel
2,150,000.00	Atom

APPENDIX II (Cont'd)

INVESTMENTS

<u>Item</u>	<u>Amount</u>
Flambeau Hydro	\$6,508,776.11
Genoa Steam	2,246,786.00
Lanesboro & Rushford Hydros	265,103.00
Leased Hydros	96,223.89
Port Arthur Redevelopment (a)	-
Twin Lakes Existing	1,227,000.00
This Addition - Twin Lakes	<u>527,000.00</u>
Sub-Total Generation	\$28,270,809.00
Miscellaneous (PCS Supplement No. 1 6/29/51)	2,327,703.02
Transmission (PCS Supplement No. 1 6/29/51)	<u>15,590,744.42</u>
Grand Total (a)	\$46,189,256.44

(a) See notes included in Supplement No. 1 dated June 29, 1951, concerning changes in funds, capacity, etc.



APPENDIX III

POWER COSTS

I System Capacity  
(See PCS Supplement No. 1 dated 6/29/51)

II Energy Requirements @ Substation - KWH	470,435,168
Energy Requirements with 9% Transmission Loss - KWH	517,000,000
Energy Generated for Lake Superior District Power	40,000,000
Grand Total Energy Requirements	557,000,000

III Energy Generated at Each Plant  
(See PCS Supplement No. 1 dated 6/29/51)

IV Costs of Generation  
(See PCS Supplement No. 1 dated 6/29/51)

5. Summary Production Costs		
(a) Steam	\$2,130,000	
(b) Diesel	352,370	
(c) Hydro	107,200	
(d) Purchase	23,000	
	<u>\$2,612,570</u>	\$ 2,612,570
6. Taxes (PCS Supplement No. 1 6/29/51)		47,000
7. Insurance (PCS Supplement No. 1 6/29/51)		50,580
8. Interest, Amortization & Replacements		
(a) 2,879,809 @ 4.5%	\$ 129,800	
(b) 25,391,000 @ 4.1%	1,040,000	
(c) Replacements (Generation)	100,000	
	<u>\$1,269,800</u>	\$ 1,269,800
9. Total Generation Expense		\$ 3,979,950
Net KWH Generated & Purchased		557,000,000
Mills/KWH Generated & Purchased		7.12
10. Transmission		
Total Annual Expense (PCS Supplement No. 1 6/29/51)	1,220,130	
11. Administrative & General		
Total Annual Expense (PCS Supplement No. 1 6/29/51)	500,894	
12. Grand Summary		
(a) Generation		\$ 3,979,950
(b) Transmission		1,220,130
(c) Administrative & General		500,894
Total		<u>\$ 5,700,974</u>
Less Sales LSDFCo. (PCS Supplement No. 1 6/29/51)		108,300
Net Cost to Cooperative		\$ 5,592,674
KWH Delivered to Cooperatives		470,051,820
¢/kwh Delivered		1.19

